

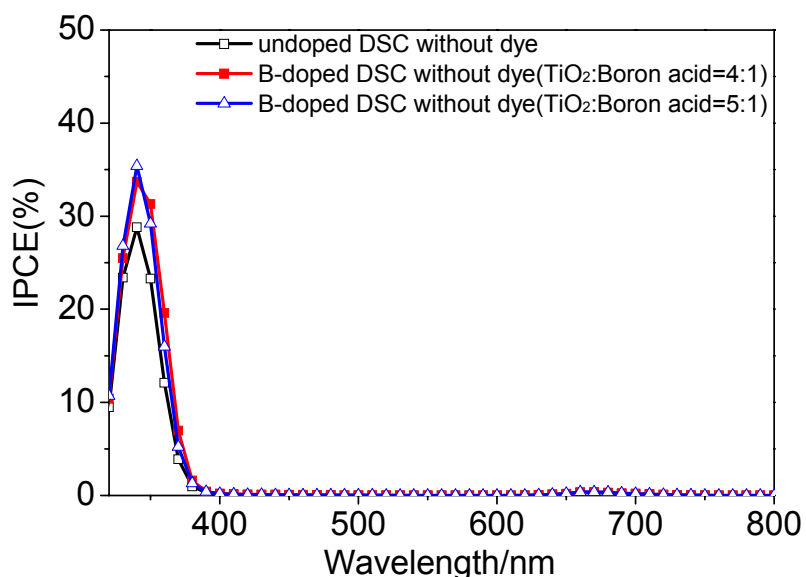
Supplementary Material (ESI) for Journal of Materials Chemistry

5 **Enhanced photovoltaic performance of dye-sensitized solar cells using highly crystallized mesoporous TiO₂ electrode modified by boron doping**

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Supplementary Figure & Table:



15 Figure S.1 Action spectra of the dye-sensitized solar cells based on undoped and boron-doped titania electrodes without dye absorption.

Table S.1 Properties of the B-doped and undoped TiO₂ in the DSCs

Type of pastes	Crystallite size (nm)	BET Surface area(m ² /g)
undoped	15.2	83.5
B-doped (TiO ₂ : Boron acid=5:1)	17.2	72.8
B-doped (TiO ₂ : Boron acid=4:1)	17.5	71.0

5 Table S.2 Characteristic parameters of the impedance spectra of DSCs based on undoped and boron-doped photoanodes in the dark at an applied forward bias of -0.72V.

DSC	$R_0(\Omega)$	$R_{ct}(\Omega)$	$C_{\mu}(mF)$	$R_p(\Omega)$	$\tau = R_{ct} C_{\mu}(ms)$
undoped	1.02	5.5	16.0	1.8	88.0
B-doped (TiO ₂ :Boron acid=4:1)	1.06	5.2	15.9	1.2	82.7
B-doped (TiO ₂ :Boron acid=5:1)	1.04	4.9	15.9	1.5	80.0